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Application of the proximal point method to a system of extended primal-dual equilibrium problems

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Abstract

We consider a general system of equilibrium type problems which can be viewed as an extension of Lagrangean primal-dual equilibrium problems. We propose to solve the system by an inexact proximal point method, which converges to a solution under monotonicity assumptions. In order to make the method implementable, we suggest to make use of a dual descent algorithm and utilize gap functions for ensuring satisfactory accuracy of certain auxiliary problems. Some examples of applications are also given. © 2006 Springer-Verlag Berlin Heidelberg.

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